# Medical Community

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Abstract

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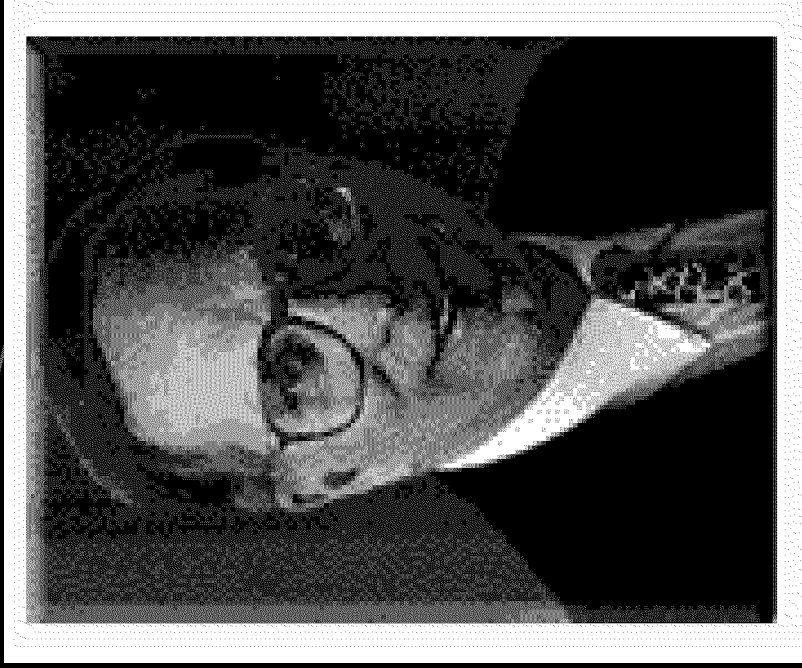
"An attack of this kind is not a question

of 'if' but 'when.'"

Former US Senator Sam Nunn

Principles and Practices

- Early rapid recognition of unusual clinical symptoms or deaths

- Rapid, clear information exchange between clinicians and Public Health organizations

- Detection of high and low frequency events

- Early recognition of outbreaks above "expected levels" of common symptoms, diseases, or deaths

- Not all epidemics are related to bioterrorism

- Do not wait for help – act now

Reportable Diseases

24 hours reporting required:

- Diphtheria
- Measles
- Rubella
- Smallpox
- Yellow Fever
- Plague
- Human Rabies
- Botulism
- Cholera
- Salmonellosis
- Typhoid Fever
- Shigellosis
- Staphylococcus
- Streptococcus

72 hours reporting required:

- Vaccinatable Diseases
- HIV
- Enterics
- Hepatitis (B,C)
- Vector-borne
- Zoonoses
- TB
- Antibiotic Resistant

Possible Delays to Report by Clinicians

- Lack of awareness

- Lack of WMD training in state and local health organizations

- Patient privacy

- Too long medical forms and other documents

- Reporting delays and lapses

- Lack of experience working together with federal, state and local Public Health organizations

Multilevel Laboratory Response Network for Bioterrorism

Level A: Public Health and hospital laboratories. Early detection of biological agent (BA) with low-level biosafety facilities (use clinical data and standard microbiological tests to decide which specimens should be shipped to the next level lab)

Level B: State and local laboratories. Can test for specific agents, minimize false positives, and characterize drug susceptibility

Level C: Academic research centers, state health and federal facilities. Perform toxicity test, nuclear acid amplification, and molecular fingerprinting

Level D: Federal laboratories. Diagnose rare diseases, maintain a strain bank of BA, detect genetically engineered agents, and develop and evaluate new tests and methods

Available Assistance in Medical Communities

- 750 EIS (Epidemic Intelligence Service)

- 300-350 CDC PHA (Public Health Advisors)

- 70 PHPS (Public Health Prevention Specialists)

- Epidemic and Emergency Response Coordinators

(Information from CDC Report, 2000)

How We Can Recognize BA

- Time to recognize BA will vary depending on several factors

- The incubational period poses the biggest danger for epidemiological control

- First symptoms might be first signs of biological attack

- Private clinics and hospitals will be the first responders and possible first victims after a biological attack

Can We Trust Hospitals?

- Unwillingness of some hospitals to accept contaminated victims

- Lack of proper training of medical staff and lack of preparedness in Emergency Rooms and other medical units, result in contamination of hospital floors within minutes or hours

- Lack of ability to properly decontaminate victims and responders

- Lack of personal protective equipment in hospitals

Positive pressure suits worn at Biosafety Level 4 allow investigators to work safely while they develop vaccines and antiviral drugs for viruses such as Ebola.

Principles and Practices

- Hot zones after biological attack

- Hospital layouts may differ but principles are still the same

- Two possible options for local hospitals

- Isolation and security precautions for hospitals, both inside and outside

Principles and Practices

- Stockpiles in the hospitals and casualty collection area (CCA)

- On-call medical units in each hospital that are specially trained on aspects of WMD

- Hospitals that are specifically built and staffed in large cities for any infectious disease outbreaks, rather than smaller infectious disease units in local hospitals

How We Can Isolate the City

- What resources are needed for Quarantine?

- What areas and epidemiological zones must be isolated immediately?

- What about evacuation and the potential dangers of this?

- Prophylaxis must be initiated within hours of confirmed BA delivery

National Pharmaceutical Stockpile (NPS) Program

- For biological and chemical terrorism events

- National repository of antibiotics, chemical antidotes, antitoxins, life-support medications, IV administration, airway maintenance supplies, and surgical items

- Supplement and re-supply state or local Public Health agencies

- Push Packages: for immediate deployment to the airfield closest to the affected area within *12 hours* of the federal decision

- If need more – Vendor Management Inventory (VMI) Packages will be shipped within *24 to 36 hours*

Questions?